

**REMARKS**

**I. Formalities**

Applicant thanks the Examiner for acknowledging the claim to foreign priority and for confirming receipt of the certified copy of the priority document.

Applicant thanks the Examiner for initialing and returning a copy of the form PTO-1449 submitted with the Information Disclosure filed on September 17, 2003.

**II. Status of the Application**

By the present amendment, claim 1 has been amended, claim 3 has been canceled and claims 13-15 have been added as new claims. Claims 1, 2 and 4-15 are all the claims pending in the application, with claim 1 being in independent form. No new matter has been added. The subject matter for the new claims 13-15 is supported at least at page 5, line 32 to page 6, line 13 of the specification.

Claims 1-5 and 9-12 have been rejected and claims 6-8 have been objected to. The present amendment addresses each point of objections and rejections raised by the Examiner.

**III. Claim Rejections - 35 U.S.C. § 102**

The Examiner rejected claims 1-4 and 9-12 under 35 U.S.C. §102(b) as being anticipated by Aoyama (US 4,830,378) ["Aoyama"]. For at least the following reasons, Applicant traverses the rejection.

The object of the present invention is to provide a golf ball which is improved in flight performance by increasing the percentage of total dimple area with respect to the entire spherical surface area. In order to achieve the above-described object, dimples of triangular shape are

defined by combining ridge-like lands having a side length of 2 to 9 mm on a golf ball that has an axis connecting opposite poles, twelve pentagons, each defined by combining five triangular dimples, that are axi-symmetrically arranged about the axis, and hexagons, each defined by combining six triangular dimples, that are arranged in the remaining area of the spherical surface. As a result, the proportion of lands on the spherical surface in the present invention is significantly reduced and the lands are uniformly arranged so that the golf ball of the present invention is further improved in flight performance.

Aoyama discloses a golf ball having an outer spherical surface and at least 320 dimples formed in the outer surface to provide land areas on the outer surface which surround the dimples. Each of the dimples has a triangular periphery at the outer surface provided by three sides and three flat surfaces which extend inwardly from the outer surface with the angle between each of the flat surfaces and a tangent to the outer surface at the intersection with the flat surface being from  $14^{\circ}$  to  $26^{\circ}$ . Each side of each dimple extends parallel to at least a portion of the side of an adjacent dimple, and the distance between the parallel sides of adjacent dimples is constant over the outer spherical surface. The total land area is no greater than 20% of a sphere which circumscribes the outer spherical surface (see Abstract and claim 1 of the patent reference).

The Examiner contends that Aoyama discloses a golf ball comprising triangular dimples formed by ridge-like lands and that figure 1 displays twelve pentagons each defined by combining five triangular dimples.

However, claim 1 recites a golf ball “wherein the ball has an axis connecting opposite poles [and] twelve pentagons each defined by combining five triangular dimples are axi-symmetrically arranged about the axis.”

In contrast, Fig. 4 of Aoyama, which is a perspective view of one hemisphere of the golf ball of Fig. 1 of Aoyama, only illustrates ten pentagons that are axi-symmetrically arranged about the axis since two pentagons among the twelve pentagons are arranged at the centers of the North pole and the South pole, respectively. Applicant has enclosed a sketch of fig. 4 of Aoyama illustrating this for the Examiner’s convenience.

Applicant submits that the ten pentagon arrangement is clearly different from the claimed twelve pentagons axi-symmetrically arrangement as set forth in claim 1. The reason for the difference between the twelve pentagons of claim 1 and the ten pentagons of Aoyama is due to the fact that the triangular arrangement in Aoyama is based on an icosahedral arrangement.

According to Aoyama, in the icosahedral triangle 59 (fig. 4), nine small triangular dimples are arranged in the center area and much larger triangle dimples are arranged in the remaining areas. Applicant submits that the balance between the small triangular dimples and the much larger triangle dimples in Aoyama is disadvantageous. Aoyama has a fault because the dimple construction of Aoyama is not rational in the arrangement and size of dimples.

Accordingly, the golf ball of Aoyama differs from the golf ball as set forth in claim 1 based at least on the dimple construction (i.e., the claimed twelve pentagons axi-symmetrically arrangement). Thus, Aoyama fails to disclose or suggest at least this feature of claim 1.

Because claims 2, 4 and 9-12 depend on claim 1, Applicant submits that these claims are patentable at least by virtue of their dependency.

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**IV. Claim Rejections - 35 U.S.C. § 103**

The Examiner rejected claim 5 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Aoyama. For at least the following reason, Applicant traverses the rejection.

Because claim 5 depends on claim 1, Applicant submits that claim 5 is patentable at least by virtue of its dependency.

**V. Allowable Subject Matter**

Applicant thanks the Examiner for finding allowable subject matter in claims 6-8 and indicating that the claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant has rewritten claim 6 in independent form and submits that claims 6-8 are allowable.

**VI. New Claims**

With this amendment, Applicant is adding claims 13 -15. Applicant submits that these claims are patentable at least by virtue of their dependency, as well as the features set forth therein.

**VII. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Amendment Under 37 C.F.R. § 1.111  
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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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**23373**

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